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EXAMINER

ODLAND, KATHRYN P

ART UNIT PAPER NUMBER

3743

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*27*

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/817,278

Applicant(s)

ADAMS ET AL.

Examiner

Kathryn Odland

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 17 February 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-77 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 22-67 is/are allowed.
- 6) ☒ Claim(s) 1-14, 17-21 and 68-77 is/are rejected.
- 7) ☒ Claim(s) 15 and 16 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

### *Response to Amendment*

This is a response to the amendment dated February 17, 2004. Claims 1-77 are pending.

### *Response to Arguments*

1. Applicant's arguments filed February 17, 2004 have been fully considered but they are not persuasive.

Applicant has amended claim 1 to include the recitation, "the wand assembly ***substantially constrains*** the actuating member from moving a distance sufficient to ignite the fuel" and argues that the lighter of Liang does not meet this limitation. However, the term constrain is defined as: to inhibit or restrain; hold back, according to The American Heritage® Dictionary of the English Language, Third Edition copyright © 1992 by Houghton Mifflin Company. In the lighter of Liang, the wand assembly is pivotable and when in the closed position ***substantially inhibits*** the actuating member from moving a distance sufficient to ignite the fuel, since the actuating member is blocked from movement. Applicant has failed to define structural elements to define over this broad recitation. In an interview on August 7, 2002, applicant was advised to define structural features to define over the prior art of record.

Applicant has also amended claim 68 to include the recitation, "wherein a lead from the ignition assembly for igniting fuel at the nozzle is disposed within the conduit. An Appendix has been provided to clarify how Sung achieves this

limitation. Sung discloses a lighter (10') having a housing assembly (12) with a supply of fuel (26); a wand assembly (14) associated with the housing assembly and having a nozzle (generally at 16); a conduit (not referenced; denoted 'C' in the Appendix) for transporting fuel from the supply to the nozzle; an ignition assembly for igniting fuel at the nozzle; and an actuating member (18) operable to selectively release fuel from the nozzle and actuate the ignition assembly, wherein a lead from the ignition assembly for igniting fuel at the nozzle is disposed within the conduit, as seen in figure 2. The conduit is considered to be that contacting the wall of element 14 and is shown in red in the Appendix. Thus, the fuel and the lead are inside the conduit. Although fuel is transported through a discrete tube/passage (28), it nonetheless is transported through the conduit 'C'. The claim language does not preclude a conduit/tube within another conduit/tube. Applicant has failed to define structural features to define over the prior art of record.

***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-8, 17-18, and 20-21 are rejected under 35 U.S.C. 102(b) as being anticipated by Liang.

Regarding claim 1: Liang clearly discloses a lighter with a housing, elements 1 and 1", as described in column 1, lines 66-69 and column 2, lines 1-3

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and seen in figure 1. There is an actuating member movable to selectively ignite the fuel and the actuating member is associated with the housing, as seen in figure 7. Liang also illustrates a movable wand assembly that is associated with the housing and operatively associated with the actuating member such that when the wand is in a first position the wand assembly substantially constrains the actuating member from moving a distance sufficient to ignite the fuel. As seen in figure 1, when the wand is rotated to the closed position, the wand blocks the actuating assembly. Additionally, when the wand is in a second position, the actuating member is movable sufficiently to ignite the fuel. Once the wand is moved to the open position and the control knob is moved to allow actuation, the lighter can ignite. Furthermore, if the safety lock is in the locked position, actuation is restricted despite the position of the wand.

Regarding claim 2: Liang clearly discloses that as applied to claim 1 as stated above as well as a movable wand assembly wherein when the wand assembly is in at least one second position, the actuating member is *movable sufficiently* to ignite the fuel. When the wand is in a second position, the actuating member is movable sufficiently to ignite the fuel. Once the wand is moved to the open position (and the control knob is moved to allow actuation), the lighter can ignite. Furthermore, if the safety lock is in the locked position, actuation is restricted despite the position of the wand.

Regarding claim 3: Liang clearly discloses that as applied to claim 2 as stated above as well as a movable wand assembly wherein when the wand assembly is positioned between the first and second positions, the actuating member is *movable sufficiently* to ignite the fuel. As seen in figure 1, when the wand is rotated to the closed position, the wand blocks the actuating assembly. Additionally, when the wand is in a second position, the actuating member is movable sufficiently to ignite the fuel. Once the wand is moved to the open position and the control knob is moved to allow actuation, the lighter can ignite. Furthermore, if the safety lock is in the locked position, actuation is restricted despite the position of the wand. There is a position between the first (closed) and second (fully open) positions where the actuation member can ignite the fuel if the safety is unlocked or may restrict actuation when the safety is locked.

Regarding claim 4: Liang clearly discloses that as applied to claim 2 as stated above as well as a movable wand assembly wherein when the wand assembly is positioned between the first and second positions, the actuating member is *immobilized sufficiently* to prevent ignition of the fuel. As seen in figure 1, when the wand is rotated to the closed position, the wand blocks the actuating assembly. Additionally, when the wand is in a second position, the actuating member is movable sufficiently to ignite the fuel. Once the wand is moved to the open position and the control knob is moved to allow actuation, the lighter can ignite. Furthermore, if the safety lock is in the locked position, actuation is

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restricted despite the position of the wand. There is a position between the first (closed) and second (fully open) positions where the actuation member can ignite the fuel if the safety is unlocked or may restrict actuation when the safety is locked.

Regarding claim 5: Liang clearly discloses that as applied to claim 1 as stated above as well as a movable wand assembly wherein the actuator member is *substantially immobilized* when the wand is in the first position. As seen in figure 1, when the wand is rotated to the closed position, the wand blocks the actuating assembly.

Regarding claim 6: Liang clearly discloses that as applied to claim 1 as stated above as well as a wand assembly that is pivotally coupled to the housing, as described in the abstract.

Regarding claim 7: Liang clearly discloses that as applied to claim 1 as stated above as well as an actuating member that is slidable as recited in column 3, lines 35-45, and seen in figure 7.

Regarding claim 8: Liang clearly discloses that as applied to claim 7 as stated above as well as a wand assembly that when in the first position, the actuating member is at least partially prevented from sliding, as recited in column 3, lines 35-45, and seen in figure 7, as well as prevented from sliding when the control knob is locked.

Regarding claim 17: Liang clearly discloses that as applied to claim 1 as stated above as well as an actuator member that is a trigger, as seen in figure 7.

Regarding claim 18: Liang clearly discloses that as applied to claim 1 as stated above as well as an actuating member that is part of an actuating assembly, as seen in figure 7.

Regarding claim 20: Liang clearly discloses that as applied to claim 1 as stated above as well as a wand assembly that when the wand assembly is in the first position, the actuating member is immobilized sufficiently to prevent the release of fuel. When the wand is in the first (closed position), the fuel is not released and/or a spark generated since the trigger is prevented from movement.

Regarding claim 21: Liang clearly discloses that as applied to claim 1 as stated above as well as a wand assembly that when the wand assembly is in the first position, the actuating member is immobilized sufficiently to prevent creation of a spark. When the wand is in the first (closed position), the fuel is not released and/or a spark generated since the trigger is prevented from movement.

4. Claims 68-72 and 74-7 are rejected under 35 U.S.C. 102(a and/or e) as being anticipated by Sung in US Patent No. 6,213,759.

Regarding claim 68, Sung clearly discloses a lighter (10') having a housing assembly (12) with a supply of fuel (26); a wand assembly (14) associated with the housing assembly and having a nozzle (generally at 16); a conduit (not referenced; denoted 'C' in the Appendix) for transporting fuel from the supply to the nozzle; an ignition assembly for igniting fuel at the nozzle; and an actuating member (18) operable to selectively release fuel from the nozzle and actuate the ignition assembly, wherein a lead from the ignition assembly for igniting fuel at the nozzle is disposed within the conduit, as seen in figure 2. The conduit is considered to be that contacting the wall of element 14 and is shown in red in the Appendix. Thus, the fuel and the lead are inside the conduit. Although fuel is transported through a discrete tube/passage (28), it nonetheless is transported through the conduit 'C'.

Regarding claim 69, Sung clearly discloses that as applied to claim 68 as recited above as well as a lead that operably connects a first electrode to a first part of the ignition assembly; and a second lead that operably connects a second electrode to a second part of the ignition assembly for generating an electrical arc between electrodes, as seen in figure 2.

Regarding claim 70, Sung clearly discloses that as applied to claim 69 as recited above as well as a first electrode that is the nozzle, as seen in figure 2.

Regarding claim 71, Sung clearly discloses that as applied to claim 69 as recited above as well as a second electrode that is a tab on the wand assembly, as seen in figure 2.

Regarding claim 72, Sung clearly discloses that as applied to claim 68 as recited above as well as a conduit and lead that allow the wand to move with respect to the housing assembly, as seen in figure 2. There is no prohibition to movement. Thus the wand is allowed to move.

Regarding claim 74, Sung clearly discloses that as applied to claim 68 as recited above as well as an actuating member that is capable of selectively releasing fuel from the nozzle and actuating the ignition assembly in first and second modes, as discussed throughout the specification and wherein pressing only the trigger (18) without prior pressing the release mechanism to force the abutment to release is a first mode and pressing the release mechanism (24) prior to the trigger (18) is a second mode.

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Regarding claim 75, Sung clearly discloses that as applied to claim 74 as recited above as well as a first force that requires an operator to apply a first force to actuate the actuating member in order to selectively release fuel from the nozzle and actuate the ignition assembly, and the second mode that requires the operator to apply a second force to the actuating member in order to selectively release fuel from the nozzle and actuate the ignition assembly, as stated in column 5 and seen in figure 2, wherein if the trigger is pressed without pressing the release mechanism will require a different/greater force.

Regarding claim 76, Sung clearly discloses that as applied to claim 75 as recited above as well as a first force that is greater than the second force, as stated above with regard to claim 75.

Regarding claim 77, Sung clearly discloses that as applied to claim 76 as recited above as well as a second mode that requires the operator to activate a second trigger, as stated above with claim 75.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 9-13, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Liang in view of Sung in US Patent No. 6,168,420.

Regarding claim 9: Liang clearly discloses that as applied to claim 1 as stated above. However, Liang does not explicitly recite a cam follower operatively associated with the housing and including a first portion for interacting with the wand assembly and a second portion for interacting with the actuating member. On the other hand, Sung clearly teaches a cam mechanism, element 60, which includes a camming surface/lever edge, element 81, and a cam follower, element 80, which is associated with the housing to interact with the camming surface. Sung also teaches to use the cam to immobilize the actuating member to prevent fuel ignition, as described in column 4, lines 1-5 as well as allow actuation, as described in column 4, lines 17-24. Sung also biases the cam follower to the cam surface with element, 90. Additionally, the use of cam mechanisms is quite common in the lighter art. Therefore, it would have been



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obvious to one of ordinary skill in the art at the time the invention was made to modify the lighter of Liang with the pivotal wand assembly to include a cam as taught by Sung to interact with the wand and the actuating member as well as the wand position for the purpose of actuator control.

Regarding claim 10: Liang clearly discloses that as applied to claim 1 and modified to apply to claim 9, as stated above. However, Liang does not explicitly recite a wand assembly that includes a camming surface in which the cam follower first portion interacts with the camming surface. On the other hand, Sung clearly teaches a cam mechanism, element 60, which includes a camming surface/lever edge, element 81, and a cam follower, element 80, which is associated with the housing to interact with the camming surface. Sung also teaches to use the cam to immobilize the actuating member to prevent fuel ignition, as described in column 4, lines 1-5 as well as allow actuation, as described in column 4, lines 17-24. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the lighter of Liang with the pivotal wand assembly to include a cam as taught by Sung to interact with the wand and the actuating member as well as the wand position for the purpose of actuator control.

Regarding claim 11: Liang clearly discloses that as applied to claim 1 and modified to apply to claim 9, as stated above. However, Liang does not explicitly recite a wand assembly in which when it is in a first position, the cam follower second position immobilizes the actuating member sufficiently to prevent ignition of the fuel. On the other hand, Sung clearly teaches a cam mechanism, element 60, which includes a camming surface/lever edge, element 81, and a cam follower, element 80, which is associated with the housing to interact with the camming surface. Sung also teaches to use the cam to immobilize the actuating member to prevent fuel ignition, as described in column 4, lines 1-5 as well as allow actuation, as described in column 4, lines 17-24. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the lighter of Liang with the pivotal wand assembly to include a cam as taught by Sung to interact with the wand and the actuating member as well as the wand position for the purpose of actuator control.

Regarding claim 12: Liang clearly discloses that as applied to claim 1 and modified to apply to claim 9, as stated above. However, Liang does not explicitly recite a wand assembly in which when it is in a second position, the cam follower second position immobilizes the actuating member sufficiently to prevent ignition of the fuel. On the other hand, Sung clearly teaches a cam mechanism, element 60, which includes a camming surface/lever edge, element 81, and a cam follower, element 80, which is associated with the housing to interact with the camming surface. Sung also teaches to use the cam to immobilize the actuating member to prevent fuel ignition, as described in column 4, lines 1-5 as well as

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allow actuation, as described in column 4, lines 17-24. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the lighter of Liang with the pivotal wand assembly to include a cam as taught by Sung to interact with the wand and the actuating member as well as the wand position for the purpose of actuator control.

Regarding claim 13: Liang clearly discloses that as applied to claim 1 and modified to apply to claim 9, as stated above. However, Liang does not explicitly recite a wand assembly wherein movement of the wand assembly causes the camming surface to move the cam follower. On the other hand, Sung clearly teaches a cam mechanism, element 60, which includes a camming surface/lever edge, element 81, and a cam follower, element 80, which is associated with the housing to interact with the camming surface. Sung also teaches to use the cam to immobilize the actuating member to prevent fuel ignition, as described in column 4, lines 1-5 as well as allow actuation, as described in column 4, lines 17-24. Sung also biases the cam follower to the cam surface with element, 90. Additionally, the use of cam mechanisms is quite common in the lighter art. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the lighter of Liang with the pivotal wand assembly to include a cam as taught by Sung to interact with the wand and the actuating member as well as the wand position for the purpose of actuator control.

Regarding claim 19: Liang clearly discloses that as applied to claim 1 and modified to apply to claim 10, as stated above. However, Liang does not explicitly recite a cam follower that is biased toward the camming surface. On the other hand, Sung clearly teaches a cam mechanism, element 60, which includes a camming surface/lever edge, element 81, and a cam follower, element 80, which is associated with the housing to interact with the camming surface. Sung also teaches to use the cam to immobilize the actuating member to prevent fuel ignition, as described in column 4, lines 1-5 as well as allow actuation, as described in column 4, lines 17-24. Sung also biases the cam follower to the cam surface with element, 90. Additionally, the use of cam mechanisms is quite common in the lighter art. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the lighter of Liang with the pivotal wand assembly to include a cam as taught by Sung to interact with the wand and the actuating member as well as the wand position for the purpose of actuator control.

7. Claims 9-14 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Liang in view of Hefling.

Regarding claim 9: Liang clearly discloses the subject matter recited in claim 1 of the present application. However, Liang does not explicitly recite a cam follower

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operatively associated with the housing that includes a first portion for interacting with the wand and a second for interacting with the actuating member. On the other hand, Hefling clearly teaches of a cam mechanism for actuation in a piezoelectric apparatus as stated by the title. Hefling also teaches of a camming surface, element 80, cam engager, element 52, cam ramp, element 47, and a cam follower, element 65. The actuator as disclosed by Hefling interacts with the cam follower as described in column 3, lines 63-68 and column 4, lines 1-4. The cam follower interacts with the camming surface as illustrated in column 4, lines 30-32. Additionally, the cam interacts with the control knob to allow or inhibit actuation as described in the abstract. Therefore, it would have been obvious to one with ordinary skill in the art at the time the invention was made to modify the lighter of Liang with the pivotal wand assembly to include a cam to interact with the wand and the actuating member at various positions as well as bias the cam for the purpose of controlled movement and to produce variable or reciprocating motion.

Regarding claim 10, Liang clearly discloses the subject matter recited in claim 1 and modified to apply to claim 9. However, Liang does not explicitly recite a wand assembly that includes a camming surface in which the cam follower first portion interacts with the camming surface. On the other hand, Hefling clearly teaches of a cam mechanism for actuation in a piezoelectric apparatus as stated by the title. Hefling also teaches of a camming surface, element 80, cam engager, element 52, cam ramp, element 47, and a cam follower, element 65. The actuator as disclosed by Hefling interacts with the cam follower as described in column 3, lines 63-68 and column 4, lines 1-4. The cam follower interacts with the camming surface as illustrated in column 4, lines 30-32. Additionally, the cam interacts with the control knob to allow or inhibit actuation as described in the abstract. The camming ramp is a surface with series detents where the first detent interacts with the follower at a portion, the second detent is spaced from the first and engages at a second position, and etc. as seen in column 3, lines 24-29 and figure 12. Hefling also biases the cam. Therefore, it would have been obvious to one with ordinary skill in the art at the time the invention was made to modify the lighter of Liang with the pivotal wand assembly to include a cam to interact with the wand and the actuating member at various positions as well as bias the cam for the purpose of controlled movement and to produce variable or reciprocating motion.

Regarding claim 11, Liang clearly discloses the subject matter recited in claim 1 and modified to apply to claim 9. However, Liang does not explicitly recite a wand assembly when in a first position has a cam follower that is in a second position and immobilizes the actuating member sufficiently to prevent ignition of the fuel. On the other hand, Hefling clearly teaches of a cam mechanism for actuation in a piezoelectric apparatus as stated by the title. Hefling also teaches of a camming surface, element 80, cam engager, element 52, cam ramp,

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element 47, and a cam follower, element 65. The actuator as disclosed by Hefling interacts with the cam follower as described in column 3, lines 63-68 and column 4, lines 1-4. The cam follower interacts with the camming surface as illustrated in column 4, lines 30-32. Additionally, the cam interacts with the control knob to allow or inhibit actuation as described in the abstract. The camming ramp is a surface with series detents where the first detent interacts with the follower at a portion, the second detent is spaced from the first and engages at a second position, and etc. as seen in column 3, lines 24-29 and figure 12. Hefling also biases the cam. Therefore, it would have been obvious to one with ordinary skill in the art at the time the invention was made to modify the lighter of Liang with the pivotal wand assembly to include a cam to interact with the wand and the actuating member at various positions as well as bias the cam for the purpose of controlled movement and to produce variable or reciprocating motion.

Regarding claim 12, Liang clearly discloses the subject matter recited in claim 1 and modified to apply to claim 9. However, Liang does not explicitly recite Liang does not explicitly recite a wand assembly when in a second position has a cam follower that is in a second position and immobilizes the actuating member sufficiently to prevent ignition of the fuel. On the other hand, Hefling clearly teaches of a cam mechanism for actuation in a piezoelectric apparatus as stated by the title. Hefling also teaches of a camming surface, element 80, cam engager, element 52, cam ramp, element 47, and a cam follower, element 65. The actuator as disclosed by Hefling interacts with the cam follower as described in column 3, lines 63-68 and column 4, lines 1-4. The cam follower interacts with the camming surface as illustrated in column 4, lines 30-32. Additionally, the cam interacts with the control knob to allow or inhibit actuation as described in the abstract. The camming ramp is a surface with series detents where the first detent interacts with the follower at a portion, the second detent is spaced from the first and engages at a second position, and etc. as seen in column 3, lines 24-29 and figure 12. Hefling also biases the cam. Therefore, it would have been obvious to one with ordinary skill in the art at the time the invention was made to modify the lighter of Liang with the pivotal wand assembly to include a cam to interact with the wand and the actuating member at various positions as well as bias the cam for the purpose of controlled movement and to produce variable or reciprocating motion.

Regarding claim 13, Liang clearly discloses the subject matter recited in claim 1 and modified to apply to claim 9. However, Liang does not explicitly recite Liang does not explicitly recite a wand assembly wherein movement of the wand assembly causes the camming surface to move the cam follower. On the other hand, Hefling clearly teaches of a cam mechanism for actuation in a piezoelectric apparatus as stated by the title. Hefling also teaches of a camming surface, element 80, cam engager, element 52, cam ramp, element 47, and a cam

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follower, element 65. The actuator as disclosed by Hefling interacts with the cam follower as described in column 3, lines 63-68 and column 4, lines 1-4. The cam follower interacts with the camming surface as illustrated in column 4, lines 30-32. Additionally, the cam interacts with the control knob to allow or inhibit actuation as described in the abstract. The camming ramp is a surface with series detents where the first detent interacts with the follower at a portion, the second detent is spaced from the first and engages at a second position, and etc. as seen in column 3, lines 24-29 and figure 12. Hefling also biases the cam. Therefore, it would have been obvious to one with ordinary skill in the art at the time the invention was made to modify the lighter of Liang with the pivotal wand assembly to include a cam to interact with the wand and the actuating member at various positions as well as bias the cam for the purpose of controlled movement and to produce variable or reciprocating motion.

Regarding claim 14, Liang clearly discloses the subject matter recited in claim 1 and modified to apply to claim 10. However, Liang does not explicitly recite a camming surface that defines a first detent for engaging the cam follower first portion when the wand assembly is in the first position. On the other hand, Hefling clearly teaches of a cam mechanism for actuation in a piezoelectric apparatus as stated by the title. Hefling also teaches of a camming surface, element 80, cam engager, element 52, cam ramp, element 47, and a cam follower, element 65. The actuator as disclosed by Hefling interacts with the cam follower as described in column 3, lines 63-68 and column 4, lines 1-4. The cam follower interacts with the camming surface as illustrated in column 4, lines 30-32. Additionally, the cam interacts with the control knob to allow or inhibit actuation as described in the abstract. The camming ramp is a surface with series detents where the first detent interacts with the follower at a portion, the second detent is spaced from the first and engages at a second position, and etc. as seen in column 3, lines 24-29 and figure 12. Hefling also biases the cam. Therefore, it would have been obvious to one with ordinary skill in the art at the time the invention was made to modify the lighter of Liang with the pivotal wand assembly to include a cam to interact with the wand and the actuating member at various positions as well as bias the cam for the purpose of controlled movement and to produce variable or reciprocating motion.

Regarding claim 19, Liang clearly discloses the subject matter recited in claim 1 and modified to apply to claim 10. However, Liang does not explicitly recite a cam follower that is biased toward the camming surface. On the other hand, Hefling clearly teaches of a cam mechanism for actuation in a piezoelectric apparatus as stated by the title. Hefling also teaches of a camming surface, element 80, cam engager, element 52, cam ramp, element 47, and a cam follower, element 65. The actuator as disclosed by

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Hefling interacts with the cam follower as described in column 3, lines 63-68 and column 4, lines 1-4. The cam follower interacts with the camming surface as illustrated in column 4, lines 30-32. Additionally, the cam interacts with the control knob to allow or inhibit actuation as described in the abstract. The camming ramp is a surface with series detents where the first detent interacts with the follower at a portion, the second detent is spaced from the first and engages at a second position, and etc. as seen in column 3, lines 24-29 and figure 12. Hefling also biases the cam. Therefore, it would have been obvious to one with ordinary skill in the art at the time the invention was made to modify the lighter of Liang with the pivotal wand assembly to include a cam to interact with the wand and the actuating member at various positions as well as bias the cam for the purpose of controlled movement and to produce variable or reciprocating motion.

8. Claim 73 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sung in US Patent No. 6,213,759.

Regarding claim 73, Sung clearly discloses that as applied to claim 72 as recited above. However, Sung does not explicitly recite a wand that is capable of moving with respect to the housing assembly. On the other hand, there are numerous flexible, rotatable and movable wand assemblies in the lighter art. Therefore, it would be obvious to one with ordinary skill in the art to modify the invention of Sung to include a movable wand assembly for the purpose of lighting at different angles with respect to the housing to ease with certain hard to reach areas.

***Allowable Subject Matter***

9. Claims 22-67 are allowed.
10. Claims 15 and 16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***

11. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

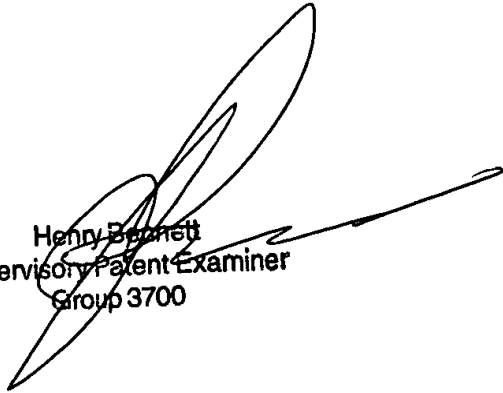
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kathryn Odland whose telephone number is (703) 306-3454. The examiner can normally be reached on M-F (7:30-5:00) First Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Henry A Bennett can be reached on (703) 308-0101. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

KO



Henry Bennett  
Supervisory Patent Examiner  
Group 3700



# Appendix

U.S. Patent

Apr. 10, 2001

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